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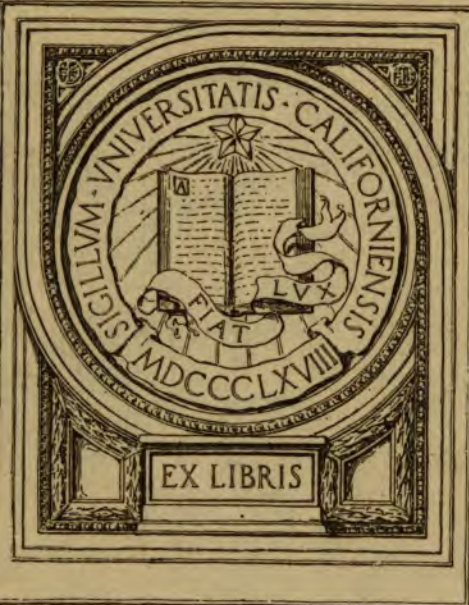
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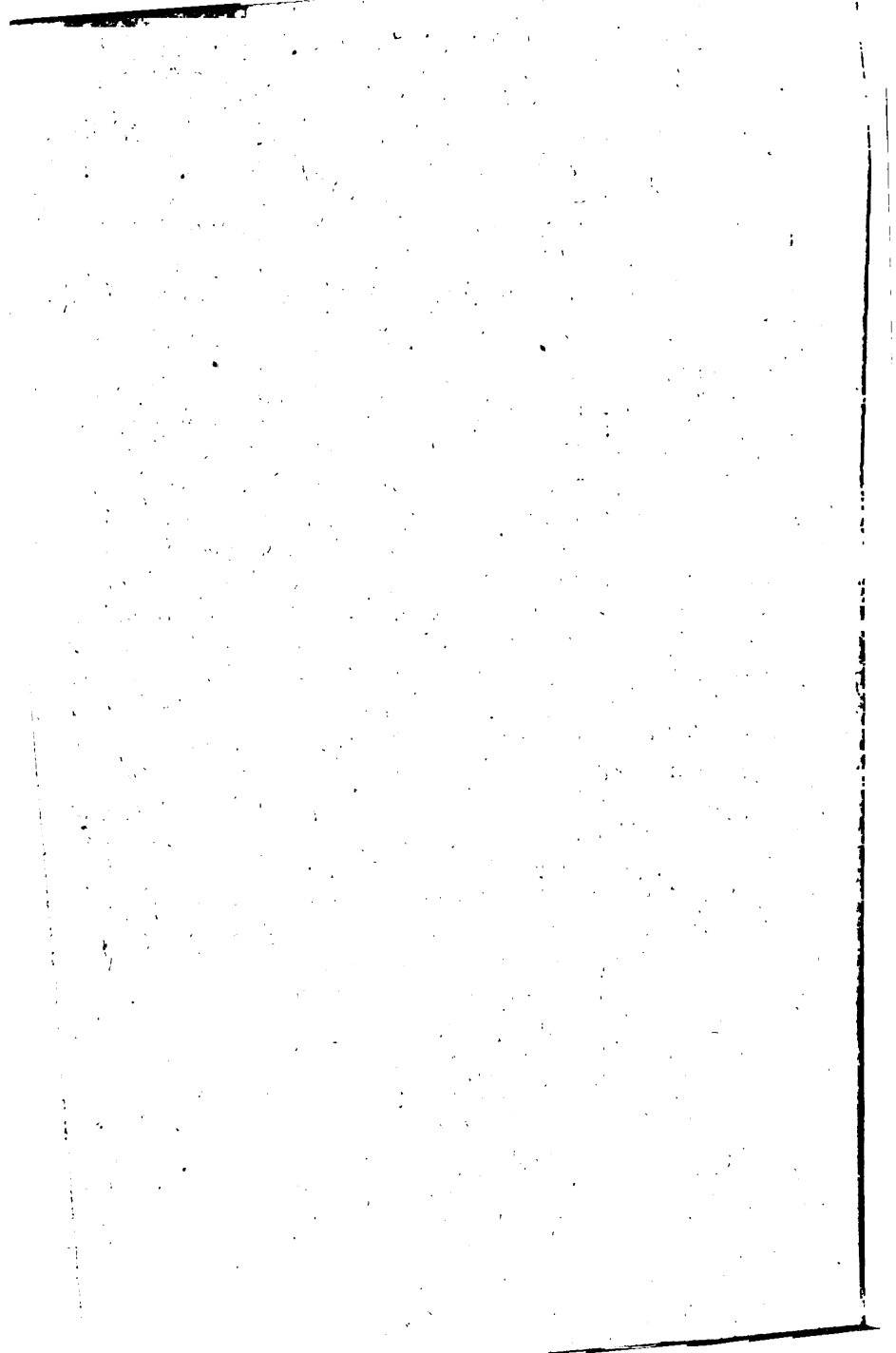
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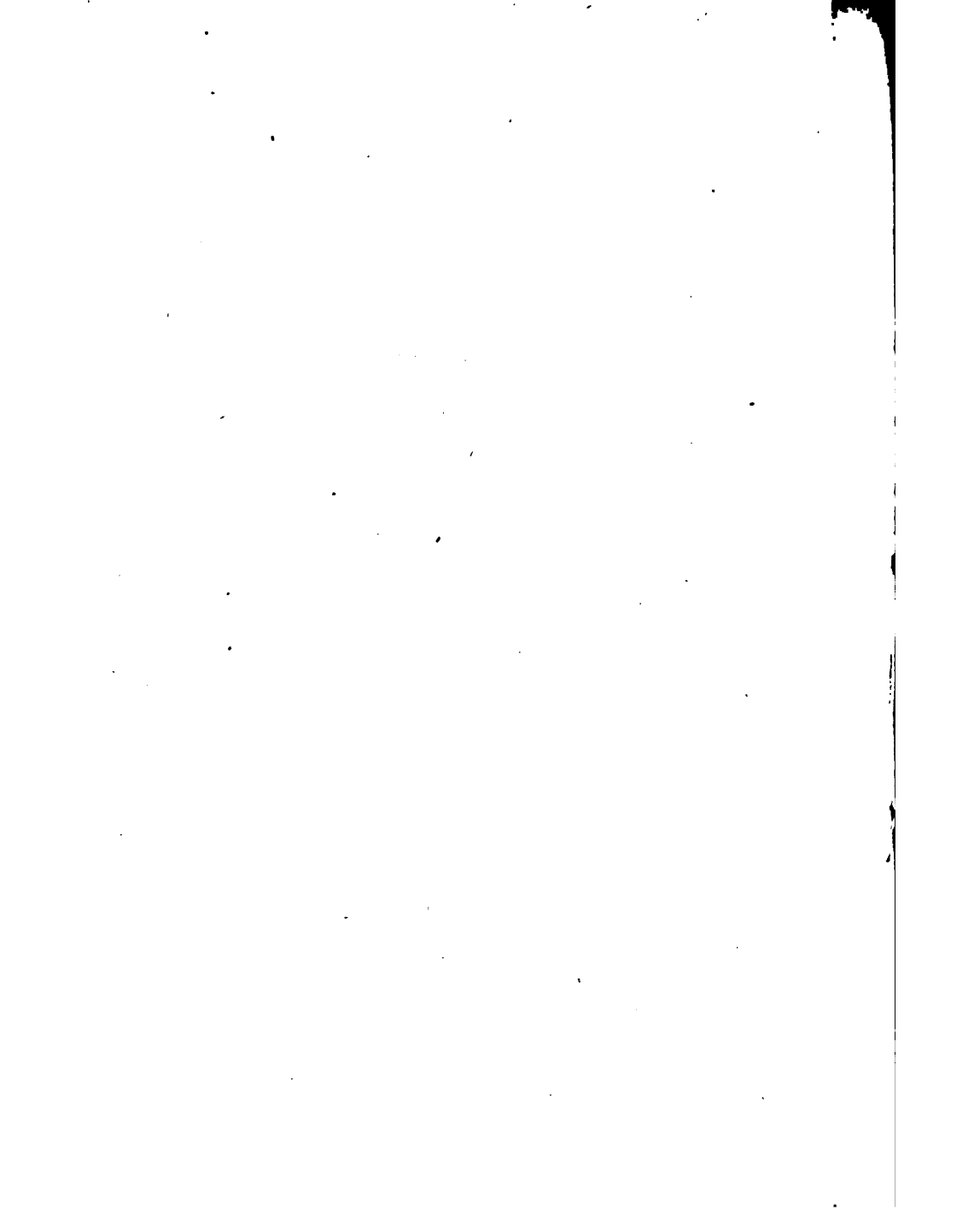
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## PREFACE.

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THIS little manual is not intended to take the place of the larger and more important works on this subject, but simply as a work of ready reference for Pteridologists and botanists generally, especially where the magnificent works of Beddome, Hooker, and others, are inaccessible; and for students who may be desirous of knowing what species of ferns are indigenous on the Island, and also something of the conditions of growth in their native habitat, for the purpose of cultivating the species most advantageously. The genera and species are arranged alphabetically, as being more convenient for reference, and also to obviate the necessity of indexing. It affords me much pleasure to express my obligations to Sir Joseph Hooker, for valuable specimens, and to Mr. J. G. Baker, of the Kew Herbarium, for valuable assistance in the way of books and information.

LORENZO G. YATES.

SANTA BARBARA, Cal., February, 1887.



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## INTRODUCTION.

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THE Island of Ceylon is situated between 5 deg. 51 min. and 9 deg. 51 min. north latitude, and between 79 deg. 41 min. 40 sec. and 81 deg. 54 min. 50 sec. east longitude, and has an area of about 25,000 square miles.

The southern portion of the Island consists of an interior mountainous region, surrounded by a low coast line of from thirty to eighty miles in width. The mountain zone covers an area of about four thousand miles. The highest mountain is Piduru Talagala, or Pedrotallagalla—8,295 feet. The rivers in this region are bordered by a dense growth of forest, and diversified with innumerable cascades and rapids, flowing through deep chasms, whose rocky walls furnish admirable conditions for fern growth, where they grow on the rocks and trees, especially in the Central and Southern Provinces. The northern portion of the Island forms a vast unbroken plain.

The summits of the highest ridges are covered with verdure, and the slopes were formerly covered with forests of lofty trees, which have rapidly disappeared under the ax of the coffee planter.

Newera Ellia Plain is at an elevation of about 6,200 feet; the Horton Plains, 7,000 feet, and Kandy, in the Central Province, is 1,727 feet.

The climate of the Island is regulated by the monsoons. The southwest monsoon prevails along the southwest coast in the early summer; the northeast monsoon reaches the northeast coast about October or November. The former drives the clouds against the lofty mountains of the south and west, supplying copious rains, which do not reach the eastern and northern por-

tions of the Island. The effects of the northeast monsoon are more uniform, and the showers extend over the entire surface of the Island. At Ratnapura, lying immediately under Adam's Peak, the yearly amount of rain is about 146 inches, and the number of rainy days 228; while at Badulla, at an altitude of 2,220 feet, the rainfall is about 58 inches, with 57 rainy days. This wide difference of climatic conditions gives suitable conditions for species having widely differing requirements for their growth, and presents a goodly list of species as indigenous to the Island.

The majority of the species grow at an elevation of between 2,000 and 5,000 feet.

The localities in the following notes are taken, principally, from "A Catalogue of the Ferns Indigenous to Ceylon, by G. W.," published in London.





## FERNS OF CEYLON.

The page numbers, after the names of the species, refer to the latest edition of Hooker & Baker's Synopsis Filicum.

### ACROSTICHUM.

A. (*Egenolfia*) APPENDICULATUM, *Willd.* (p. 415).

Very common among stones, in the beds of streams, in the forests of the Central Province, up to an altitude of 5,000 feet.

A. (*Chrysodium*) AUREUM, *L.* (p. 423).

Very abundant in swamps about Galle and Colombo. Widely distributed throughout the tropics.

A. (*Elaphoglossum*) CONFORME, *Sw.* (p. 401).

Common in the forests of the Central Province, above an altitude of 4,000 feet, on rocks and trees. Widely distributed, and has a long list of synonyms.

A. (*Chrysodium*) LANCEOLATUM, *Hobk.* (p. 420).

At Rambodde and below Pittawella, on rocks, in river-beds.

A. (*Gymnopteris*) QUERCIFOLIUM, *Retz.* (p. 418.)

Common in the Western Province, about Colombo, on roadside banks.

A. (*Stenochlæna*) SCANDENS, *J. Sm.* (p. 412).

Very common, climbing on trees, in the Western, Central and Southern Provinces, up to an altitude of 2,500 feet; fruits from August to October.

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ACROSTICHUM (Elaphoglossum) SPATHULATUM, *Dory.* (p. 408).  
—*A. piloselloides*, *Pret.*; *A. acutum*, *Fee.*

On rocks, in the forests about Newera Ellia, and in the Southern Province, at a lower elevation.

*A. (Hymenolepis) SPICATUM*, *L.* (p. 424).

In the forests of the Central Province, at an altitude of from 2,000 to 4,000 feet; on trees. Not uncommon.

*A. (Elaphoglossum) SQUAMOSUM*, *Sw.* (p. 411).

Above Rambodde, at an altitude of about 5,000 feet; on trees. Fruits from August to November.

*A. (Gymnopteris) VARIABLE*, *Hook.* (p. 417).

The simple fronded form is common on rocks and banks in the forests of the Central Province, at an altitude of from 3,000 to 6,000 feet. The pinnate form, in the forests about Matale, at an altitude of 3,000 feet; abundant during southwest monsoon.

*A. (Gymnopteris) VIRENS*, *Wall.* (p. 420).

In the ground, in Oodawella forests.

*A. (Chrysodium) WALLII*, *Baker.* (p. 523).

In a rocky ravine, on mossy stones, at Moorooa, Southern Province. Peculiar to Ceylon.

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#### ACTINIOPTERIS.

*A. RADIATA*, *Link.* (p. 246).—*A. australis*, *Link.*; *Acrostichum dichotomum*, *Forst.*

At Trincomalee and Gonogamma, near Kandy. The only species of the genus.

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#### ADIANTUM.

*A. CAPILLUS-VENERIS*, *L.* (p. 125).

On wet rocks, about Hackgalla.

*A. CAUDATUM*, *Linn.* (p. 115).—*A. Edgeworthi*, *Hk.*; *A. rhizophorum*, *Sw.*

Abundant in the Central, Western and Southern Provinces, up to an altitude of 2,000 feet; on rock, walls and dry banks.

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*ADIANTUM FLABELLULATUM*, *L.* (p. 126).—*A. amœnum*, *Hk.* and *Gr.*

Found in Ouva District.—Thwaites.

*A. HISPIDULUM*, *Swtz.* (p. 126).

Common in the forests of the Central Province, up to an altitude of 4,000 feet. Terraneous, and on rocks.

*A. LUNULATUM*, *Burm.* (p. 114).—*A. deflectens*, *Mart.*; *A. dolabriforme*, *Hk.*; *A. filiforme*, *Gard.*

Common on old walls about Kandy and Central Province; very abundant on eastern ranges, down to Binteune.

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#### ALLANTODIA.

*A. BRUNONIANA*, *Wall.* (p. 246).

Common in the forests of the Central Province, at an altitude of from 2,000 to 4,000 feet; terraneous. The only species of the genus.

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#### ALSOPHILA.

*A. CRINITA*, *Hook.* (p. 42).

Large tree fern, from ten to twenty feet high. Abundant in the forests of the Central Province, at an altitude of from 4,500 to 6,000 feet.

*A. GLABRA*, *Hk.* (p. 43).—*A. gigantea*, *Hk.*

Large fronded tree fern, of low stature. In forests of the Central Province, at an altitude of from 3,000 to 5,000 feet. Not common.

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#### ANGIOPTERIS.

*A. EVECTA*, *Hoffm.* (p. 440).

Common in the forests of the Central Province, at an altitude of from 3,000 to 5,000 feet. Terraneous. The only known species of the genus.



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ANTROPHYUM.

A. PLANTAGINEUM, *Kaulf.* (p. 393).—A. Lessoni, *Bory*; Hemionitis plantagineum, *Cav.*

Common on rocks, in the forests of the Central Province, above an altitude of 2,000 feet.

A. RETICULATUM, *Kaulf.* (p. 393).—Hemionites reticulata, *Forst.*

Common in the Southern Province, at low altitudes, above 2,000 feet.

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ASPIDIUM.

A. (Polystichum) aculeatum, *Sw.* (p. 252).—A. Biaristatum, *Bl.*

Common in the forests of the Central Province, above an altitude of 5,000 feet. Found nearly all over the world.

A. (Polystichum) AMABLE, *Blume.* (p. 254).

Not uncommon in the forests of the Central Province; at an altitude of from 5,000 to 6,000 feet. Terraneous.

A. (Polystichum) ANOMALUM, *Hk. and Arn.* (p. 253).

Horton Plains and Happootella, at an altitude of from 5,000 to 6,000 feet. Deciduous. Peculiar to Ceylon (?).

A. (Polystichum) ARISTATUM, *Sw.* (p. 255).

Common in the forests of the Central Province, at an altitude of from 1,500 to 6,000 feet. Terraneous.

A. (Polystichum) AURICULATUM, *Sw.* (p. 251).—A. ocellatum, *Wall.*

Common in the forests of the Central Province, at an altitude of about 5,000 feet. Terraneous.

A. (Polystichum) CONIIFOLIUM, *Wall.* (p. 255)—A. aristatum, *var.*

Common in the forests of the Central Province, at an altitude of from 4,000 to 6,000 feet.

*ASPIDIUM ERIOCARPUM*, *Dec.* (p. 280).—*Nephrodium odoratum*, *Bkr.*

*A. MEMBRANACEUM*, *Hk.* (p. 259).—*A. giganteum*, var. *minor*, *Hook.*; *A. divexum*, *Kze.*

Common in the Matale District, at about an altitude of from 1,000 to 1,500 feet. Terraneous.

### ASPLENIUM.

*A. AFFINE*, *Sw.* (p. 215).—*A. spathulatum*, *J. Sm.*  
Common.

*A. (Athyrum) ASPIDIOTIDES*, *Schl.* (p. 228)—*A. pectinatum*, *Wall.*; *A. multisectum*, *Brack.*; *A. laxum*, *P.* and *R.*

About Newera Ellia, in forests, up to an altitude of 7,000 feet. Terraneous. In boggy places, at high elevations.—Thwaites.

*A. (Diplazium) ASSIMILE*, *Endl.* (p. 489; 229)—*A. umbrosum*, *J. Sm.*, var.

In the forests about Pittawella, Matale, at an altitude of about 2,000 feet. Terraneous.

*A. CAUDATUM*, *Forst.* (p. 209)—*A. falcatum*, *Lam.* (?).  
Newera Ellia, and higher forests of the Central Province.

*A. ENSIFORME*, *Wall.* (p. 191)—*A. stenophyllum*, *Bed.* (?).  
About Newera Ellia, and Wattakelly Hill, above an altitude of 5,000 feet; on rocks and trees.

*A. ERECTUM*, *Bory.* (p. 202)—*A. lunulatum*, *Sw.*  
Not uncommon in the higher forests of the Central Province.

*A. (Anisogonum) ESCULENTUM*, *Presl.* (p. 244).  
Common in the Western and Central Provinces, up to an altitude of 3,000 feet. Terraneous. Very common in the low country, by riversides, and in cultivated ground.—Thwaites.

*ASPLENIUM FALCATUM*, *Lam.* (p. 208).

Common, on rocks, in the Western and Central Provinces, at low altitudes; also at Pattawella Rock, near Columbo.

*A. FORMOSUM*, *Willd.* (p. 210).

Not common. Found on rocks in river bed, Dooroomadella, East Matale.

*A. FURCATUM*, *Thunb.* (p. 214).

Common about Newera Ellia and Hackgalla. Common in the hills.—Thwaites.

*A. GARDNERI*, *Baker* (p. 485).

Southern Province, on rocks, in the forests, above an altitude of 1,500 feet.

*A. HETEOCARPUM*, *Wall.* (p. 210).

Common, on rocks, in the Central Province, in the forests, above an altitude of 3,000 feet.

*A. HOHENACKERIANUM*, *Kze.* (p. 225<sup>f</sup>).

Resembles small form of *Felix-fœmina*. At Pittawella; also in Peninsular India.

*A. (Diplazium) LANCEUM*, *Thunb.* (p. 229)—*A. subsinuatum*, *Hk.* and *G.*

Forests of East Matale, and Suffragam, at an altitude of from 2,000 to 3,000 feet. Terraneous. Dies off during the northeast monsoon.

*A. (Diplazium) LATIFOLIUM*, *Don.* (p. 239)—*A. dilatatum*, *Hk.*

Common in the forests of the Central Province, at an altitude of from 3,000 to 5,000 feet. Terraneous.

*A. LASERPITHIFOLIUM*, *Lam.* (p. 215).

Common.

*A. (Athyrium) MACROCARPUM*, *Bl.* (p. 227)—*A. goringianum*, *Mett.*

Not uncommon about Newera Ellia. Terraneous.

*ASPLENIUM* (*Diplazium*) *MAXIMUM*, *Don.* (p. 239)—*A. diversifolium*, *Wall.*

Local, but abundant in some of the forests.—Thwaites. At an altitude of from 2,000 to 4,000 feet. Terraneous.

*A. (Thamnopteris) NIDUS*, *L.* (p. 190).

"The Birds-nest Fern." Common on trunks of trees, up to an altitude of 2,000 feet.

*A. (Athyrum) NIGRIPES*, *Blume* (p. 227)—*A. gymnogrammoides*, *Kl.*

Common in the forests of the Central Province, above an altitude of 5,000 feet. Terraneous.

*A. NITIDUM*, *Sw.* (p. 215).

Common.

*A. NORMALE*, *Don.* (p. 197)—*A. multijugum*, *Wall.*

Common at altitudes above 4,000 feet. Terraneous.

*A. PLANICAULE*, *Wall.* (p. 211).

Not common. Wattakelly Hill, Victoria Forests, above an altitude of 3,000 feet, on rocks and trees.

*A. (Diplazium) POLYPODIOIDES*, *Mett.* (238).

Common in the forests of the Central Province, above an altitude of 3,000 feet. Terraneous.

*A. POLYRHIZON*, *Baker* (p. 490)—*Diplazium decussatum*, *Bedd.* Formerly referred to *A. Japonicum*, *Thun.*

*A. RESECTUM*, *Sm.* (p. 210).

Common in the forests of the Central Province, above an altitude of 2,000 feet; generally on rocks and rocky banks. The large form, in wet, swampy places.

*A. (Daræa) RUTÆFOLIUM*, *Kze.* (p. 222)—*A. prolongatum*, *Hk.;*  
*A. stans*, *Kze.*

Singhe Raja forest.

ASPLENIUM (Diplazium) SCHKUHRII, *Thw.*

Formerly included under Japonicum. Woods of the Central Province. Not common.—Thwaites. Peculiar to Ceylon.

A. (Anisog.) SMITHIANUM, *Baker* (p. 245).

In the forests of Oodawella and East Matale, at an altitude of 3,000 feet. Terraneous. "Only found in Ceylon, and is rare there. It is only distinguished from *A. latifolium* by its venation."—Thwaites.

A. (Diplazium) SYLVATICUM, *Presl.* (p. 232).

In damp forests, at no great elevation.—Thwaites. Terraneous.

A. TENERUM, *Forst.* (p. 201)—*A. elongatum*, *Sw.*

East Matale, Oodawella; on rocks. Not common.

A. TENUIFOLIUM, *Don.* (p. 220)—*A. concinnum*, *Wall.*

On rocks, in the beds of streams, at Newera Ellia. Rare. Dies off during the southwest monsoon.

A. (Diplazium) THWAITESII, *A. Br.* (p. 235).

In the forests about Newera Ellia. Terraneous. "Woods, 2,000 feet and upwards."—Thwaites.

A. VARIANS, *Hk. and Gr.* (p. 216).

Abundant under rocks and large stones, Mattoorattoo, Ambawella, Rambodde, at an altitude of from 3,000 to 5,000 feet.

A. VULCANICUM, *Bl.* (p. 201)—*A. heterodon*, *Mett.*

Forests of the Central Province, above an altitude of 2,000 feet. Not common.

A. WIGHTIANUM, *Wall.* (p. 199)—*A. longipes*, *Fee.*

Forests of the Central Province, above an altitude of 2,000 feet. Not common.

A. ZENKERIANUM, *Kze.* (p. 484).

Common, on rocks, about Newera Ellia, and in the forests, above an altitude of 5,000 feet. In former catalogues, *A. persicifolium*, *J. Sm.*

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*ASPLENIUM* (*Diplazium*) *ZEYLANICUM*, *Hk.* (p. 230).

Forests of Ambagamowa and Kotmallee. "Rare; local. I never found it myself."—Thwaites.

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**BLECHNUM.**

*B. ORIENTALE*, *Linn.* (p. 186).

Extremely abundant in the Western and Central Provinces, up to an altitude of 6,000 feet. Terraneous.

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**BOTRYCHIUM.**

*B. DAUCIFOLIUM*, *Wall.* (p. 448).

Not uncommon on the borders of streams, in the forests of the Central Province, at an altitude of from 2,500 to 4,000 feet. Terraneous. Dies off during a part of the year.

*B. VIRGINIANUM*, *Sw.* (p. 448).

Common, under bushes, on the plain of Newera Ellia. Dies off in January; comes up again in June.

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**CERATOPTERIS.**

*C. THALICTROIDES*, *Brong.* (p. 174).

Common in the Western and Southern Provinces, in wet, swampy places. This is the only species of a curious genus; it is an annual, and floats upon the surface of the water.

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**CHEILANTHES.**

*C. FARINOSA*, *Klf.* (p. 142)—*Aleuritopteris farinosa*, *dealbata* and *Mexicana*, *Fee.*

Silver Fern. On rocks of the highest forests of the Central Province. Common on the hills.—Thwaites.

*C. MYSURENSIS*, *Wall.* (p. 135)—*C. chusana*, *Hk.*

On rocks and banks, Rattotta, Matale, Happootella and Ouvah, at low elevations. "Rocky places; very local."—Thwaites.

*C. TENUIFOLIA*, *Sw.* (p. 138).

On rocks and banks, Western Province.

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CHEILANTHES THWAITESII, *Kuhn., Mett.*; (p. 475).  
Kurunagalla and Kallupahane.

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### CYATHEA.

C. HOOKERI, *Thwaites* (p. 16).

Small tree fern, from five to seven feet high. Forests of the Southern Province. Of this peculiar species, Dr. Thwaites says: "Low country forests, very rare, and scarcely ever found in fruit. I only found it once, a single tree with barren fronds only."

C. SINUATA, *Hk. and Gr.* (p. 16).

Small tree fern, from three to five feet high. Forests of the Southern Province. Rare. Peculiar to Ceylon. An elegant and graceful plant, with simple fronds.

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### DAVALLIA.

D. (Leucostegia) AFFINIS, *Hook.* (p. 92)—D. hymenophylloides, *Bl.*

On rocks and trees, in the forests of the Central and Southern Provinces. Common at an elevation of from 3,000 to 4,000 feet. Common in mountain forests.—Thwaites.

D. BULLATA, *Wall.* (p. 97).

On trees, at Dooroomadella and Matale West, at an elevation of from 2,000 to 3,000 feet.

D. CHÆROPHYLLA, *Wall.* (p. 92)—D. pulchra, *Don.*

Rocky forests; rare and local.—Thwaites. At an elevation of from 3,000 to 5,000 feet; on rocks.

D. (Prosaptia) CONTIGUA, *Sw.* (p. 94)—D. Preslii, *Hook.*

Common on rocks and trees, in the forests of the Central Province, above an altitude of 5,000 feet.

D. ELEGANS, *Sw.* (p. 95)—D. vogelii, *Hk.*; D. elata, *Sw.*

On rocks, at Vicarton and East Matale, at an altitude of from 2,000 to 3,000 feet.

DAVALLIA (Prosapta) EMERSONI, *Hk. and Gr.* (p. 94)—*D. alata*, *Bl.*

On rocks and trees, in the forests of the Southern Province, at an elevation of from 2,000 to 4,000 feet.

*D. (Microlepia) HIRTA*, *Klf.* (p. 100)—*M. firma* and *M. scaberrula*, *Mett.*

In forests of Oodapusselawa and Telgamma, at an elevation of 4,000 feet. Terraneous.

*D. (Microlepia) MAJUSCULA*, *Loise* (p. 99)—*D. proxima*, *Thw.*; *D. Thwaitesii*, *Baker.*

Rangbodde. Rare. Probably dies off during part of the year.

*D. (Humata) PEDATA*, *J. Sm.* (p. 89).

Common on rocks and trees, in the forests of the Central and Southern Provinces, above an elevation of 1,500 feet.

*D. (Microlepia) PLATYPHYLLA*, *Don.* (p. 99)—*D. lonchitidea*, *Wall.*

Eight to twelve feet high. Rangbodde, in the forest, at an altitude of 3,500 feet. Terraneous; rare; dies off during a part of the year.

*D. (Odontoloma) REPENS*, *Desv.*—*D. hemiptera*, *Bory.*  
Singe Raja forest.—Thwaites.

*D. SCHIZOPHYLLA*, *Baker.* (p. 468).

On Abbe Rocks, Moorooowa Carle, at an elevation of 5,000 feet.

*D. (Microlepia) SPELUNCÆA*, *Bkr.* (p. 100)—*D. polypodioides*, *Hk.*; *D. Jamaicensis*, *Hk.*; *D. trichosticha*, *Hk.*; *D. Madagascarensis*, *Kze.*

Common below an elevation of 3,000 feet, on shady banks, in the Central, Western and Southern Provinces. In hedges, at Kalani.



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DAVALLIA (*Microlepia*) STRIGOSA, *Sw.* (p. 98)—*D. proxima*, *Bl.*  
Common in the hilly forests of the Central Province, at an  
elevation of from 2,000 to 4,000 feet. Terraneous.

*D. (Stenoloma) TENUIFOLIA*, *Sw.* (p. 102).

Roadsides and open places in the hills; common.—Thwaites.  
Abundant on moist banks, in the Central Province, above 3,000  
feet.

*D. (Humata) VESTITA*, *Bl.* (p. 90)—*D. bipinnatifida*, *Bl.*

Ambawella forest, below Hackgalla, at an elevation of about  
5,000 feet, on trees.

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#### DIACALPE.

*D. ASPIDIOIDES*, *Blume.* (p. 45).

Abundant at Kooroonda Oya, Matturatto. Terraneous; dies  
off during the northeast monsoon. The only species of the genus.

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#### DICKSONIA.

*D. SCABRA*, *Wall.* (p. 54)—*D. deltoidea*, *Hk.*

Abundant in the Central Province, above an elevation of  
5,000 feet.

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#### DOODIA.

*D. DIVES*, *Kze.* (p. 189).

Not uncommon about Hackgalla and in the forests of the  
Central Province, above an elevation of 4,000 feet. Terraneous.

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#### DRYMOGLOSSUM.

*D. PILOSELLOIDES*, *Prest.* (p. 398).

Very common, on trees, about Columbo, and all over the Western  
and Central Provinces, below an elevation of 2,000 feet.

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#### GLEICHENIA.

*G. (Mertensia) DICHOTOMA*, *Willd.* (p. 15).

This widely distributed species has a long list of synonyms.  
Extremely abundant at all elevations. Scrambles over small  
shrubs in the open country.

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GYMNOGRAMME.

G. (Selliguea) INVOLUTA, *Don.* (p. 387)—*Selliguea Wallichiana*, *Hk.*

On rocks and trees, in the forests about Newera Ellia. Common.

G. JAVANICA, *Blume.* (p. 381).

In the forests about Newera Ellia and Mattoorattoo. Terraneous.

G. (Selliguea) LANCEOLATA, *Hook.* (p. 387).

On Pedrotallagalla, on trees, half way up the peak. Very rare.

G. LEPTOPHYLLA, *Desv.* (p. 383).

An annual. Found on rocks, above Hackgalla Gardens. Rare.

G. (Leptogramme) TOTTA, *Schl.* (p. 376)—G. *Lowe*, *Hk.* and *Gr.*

In the forests about Newera Ellia. Terraneous.

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HELMINTHOSTACHYS.

H. ZEYLANICA, *Hk.* (p. 447).

In the hedge banks about Colombo, and other parts of the Western and Southern Provinces.

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HEMIONITIS.

H. CORDATA, *Presl.* (p. 398).

Common, on rocks and banks, in the Western and Central Provinces, at all elevations up to 3,000 feet.

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HEMITELIA.

H. WALKERÆ, *Hk.* (p. 30)—*Cyathea Walkeræ*, *Hk.*

Large tree-fern, ten to twelve feet high. Abundant in the forests of the Central Province, at an elevation of from 3,000 to 6,000 feet. Peculiar to Ceylon.

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HYMENOPHYLLUM.

*H. EMERSUM*, *Baker* (p. 57).—*H. tenellum*, *Kuhn*.

On trees, in the forests of the Southern Province, at an elevation of from 2,000 to 4,000 feet.

*H. EXSERTUM*, *Wall.* (p. 59).—*H. macroglossum*, *V. D B.*

Common, on wet rocks, in the forests of the Central Province.

*H. JAVANICUM*, *Spreng.* (p. 60).

Has several synonyms. Abundant, on rocks and trees, in the forests of the Central and Southern Provinces, above 2,500 feet.

*H. NEESII*, *Hooker* (p. 71).

Common, on rocks and trees, in the forests of the Central and Southern Provinces, above an elevation of 3,000 feet.

*H. POLYANTHOS*, *Sw.* (p. 60).—*H. protrusum*, *Hk.*

Typical form rare. On trees and rocks, in the forests. Variety *Blumeana* is common in the forests of the Southern Province, on wet rocks. Dies off during northeast monsoon.

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LINDSAYA.

*L. CULTRATA*, *Sw.* (p. 105).—*L. Lobbiana*, *Hk.*

Common, on rocks and moist banks, about Newera Ellia, and at high elevations in forests of the Central Province. Deliciously fragrant when drying.

*L. FLABELLULATA*, *Dry.* (p. 107).—*L. tenera*, *Dry.*; *Adiantum orbiculatum*, *Lam.*

In the forests of the Central and Southern Provinces. Terraneous; not uncommon.

*L. (Schizoloma) HETEROPHYLLA*, *Dry.* (p. 112).—*L. cuneata*, *Willd.*

Hantane Peak, Kegalla. Terraneous. Dies off during the northeast monsoon.

LINDSAYA (Schizoloma) LANCEOLATA, *Lab.* (p. 112)—*L. ensifolia*, *Swtz.*; *L. agatii*, *Brack.*; *L. Griffithianum*, *Hk.*; *L. pentaphyllum*, *Hk.*

At low elevations, in the Central and Southern Provinces. Common; terraneous.

*L. (Synaphlebium) LOBATA*, *Poir.* (p. 111)—*L. recurvata*, *Wall.*; *L. propinqua*, and *obtusa*, *Hook.*; *L. nitens*, *Bl.*

Common in the forests of the Central Province, above an elevation of 2,000 feet. Terraneous. Damp gullies in the hills.—Thwaites.

*L. TRAPEZIFORMIS*, *Dry.* (p. 107).

Has a number of synonyms. Common in the woods.—Thwaites. Very abundant in some forests of the Southern Province; also on the Peacock. Terraneous.

*L. (Isoloma) WALKERÆ*, *Hk.* (p. 109).

In swamps in the Hinidoon Corle; also on the Island of Banca, east of Sumatra.

### LOMARIA.

*L. PATERSONI*, *Spr.* (p. 174)—*L. elongata*, *Bl.*, *L. Colensoi*, *Hk.*  
Common in the forests of the Central Province. Terraneous.

### LYGODIUM.

*L. DICHOTOMUM*, *Sw.* (p. 437)—*L. circinatum* and *pedatum*, *Sw.*

Not uncommon. Climbing on trees, in the forests and chevas of the Western, Central and Southern Provinces, up to an elevation of 2,000 feet.

*L. JAPONICUM*, *Sw.* (p. 439).

"A Catalogue of the Ferns Indigenous to Ceylon" places this as a synonym of *L. pinnatifidum*.

*L. PINNATIFIDUM*, *Sw.* (p. 438)—*L. flexuosum*, *Sw.*

Common about Colombo, scrambling over hedges and low shrubs.

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LYGODIUM SCANDENS, *Sw.* (p. 437).

Very common in all the low country, scrambling over low shrubs.

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#### MARATTIA.

M. FRAXINEA, *Sm.* (p. 440)—M. sorbifolia, *Bory.*; M. elegans, *Endl.*

Not uncommon in the forests of the Central Province, above an elevation of 5,000 feet, in the beds of streams.

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#### MENISCIUM.

M. THWAITESII, *Hk.* (p. 391).

Forests of Matale, at an elevation of about 3,000 feet. Terraneous. Peculiar to Ceylon.

M. TRIPHYLLUM, *Sw.* (p. 391).

Forests of Matale and Suffragam, at an elevation of from 2,000 to 3,000 feet. Terraneous.

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#### MONOGRAMME.

M. JUNGHUHNII, *Hk.* (p. 375)—Diclidopteris angustissima, *Brack.*; Pleurogramme paradoxa, *Fee.*

On rocks and trees, in the forests of the Central and Southern Provinces, at an elevation of about 3,000 feet.

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#### NEPHRODIUM.

N. AMBOINENSE, *Presl.* (p. 292).

Small form, at Kitool Galla, Ambagama; large form, Ambawella and Oodapusselawa, at an elevation of about 5,000 feet. Terraneous.

N. ARBUSCULA, *Desv.* (p. 292)—A. Hookeri, *Wall.*

Common in hill forests of the Central Province, at an elevation of from 3,000 to 5,000 feet. Terraneous.

L. (Lastrea) BEDDOMEI, *Baker* (p. 267)—Aspidium gracilescens, *Thwaites.*

Very common, in swampy places, about Newera Ellia.

NEPHRODIUM (*Lastrea*) BORYANUM, *Baker* (p. 284)—*N. divisum*, *Hk.*

Forests of the Central Province, at an elevation of from 4,000 to 5,000 feet. Terraneous.

*N.* (*Lastrea*) CALCARATUM, *Hk.* (p. 264)—*N. falcilobum*, *Hk.*

Very common, at all elevations up to 6,000 feet, in the Central, Southern and Western Provinces. Terraneous.

*N.* (*Sagenia*) CICUTARIUM, *Baker* (p. 299)—*Aspidium latifolium*, *Presl.*; *A. dilaceratum*, *Kze.*

Forests about Rambodde. Dies off during northeast monsoon. Terraneous.

*F. CUCULLATUM*, *Baker* (p. 290)—*N. unitum*, *Sieb.*; *N. canescens*, *Presl.*

Very common, on banks, roadsides and cultivated grounds, in the Central Province and Ouvah, up to an elevation of 5,000 feet.

*N.* (*Sagenia*) DECURRENS, *Baker* (p. 299)—*Aspidium pteropus*, *Kze.*

Damp places. A low-country fern, and up to about 2,000 feet.—Thwaites. Terraneous. Dies off during the northeast monsoon. Var. minor—var. *Thwaitesii*, of Kew Gardens, at Peradeniya Garden, is peculiar to Ceylon.

*A.* (*Lastrea*) DEFARIOIDES, *Hk.* (p. 277).

Low country forests; not common.—Thwaites. Up to an elevation of 1,000 feet. Terraneous.

*N.* (*Lastrea*) DISSECTUM, *Desv.* (p. 282)—*N. membranifolium*, *Presl.*

Hill forests. This plant is only distinguished from *N.* (*Pleocnemia*) giganteum by its venation.—Thwaites. Not uncommon in the forests of the Central and Southern Provinces, at an elevation of from 4,000 to 5,000 feet. Terraneous.

*N. EXTENSUM*, *Hook.* (p. 289)—*Aspidium conioneuron*, *Mett.*

Forests Central Province; not common.—Thwaites. Terraneous.

NEPHRODium (Lastrea) FELIX-MAS, *Rich.* (p. 272).  
Forests about Newera Ellia. Terraneous.

N. (Lastrea) FLACCIDUM, *Hook.* (p. 274).  
Wattakelly Hill and forests about Newera Ellia. Terraneous.

N. (Pleocnemia) GIGANTEUM, *Baker* (p. 503).  
Common in the forests of the Central and Southern Provinces, at an elevation of from 2,000 to 4,000 feet. Terraneous.

A. HÆNKEANUM, *Presl.* (p. 290)—*Aspidium multilineatum*, *Mett.*

N. HIRTIPES, *Hook.* (p. 261)—*Aspidium atratum*, *Wall.*  
Common in the forests of the Central Province, at an elevation of about 3,000 feet. Terraneous.

N. (Lastrea) INTERMEDIUM, *Baker* (p. 283)—*N. Blumei*, *Hk.*  
Forests of East Matale, at from 2,000 to 3,000 feet. Terraneous.

N. MOLLE, *Desv.* (p. 293).  
Very common in the Western, Southern and Central Provinces, up to an elevation of 6,000 feet. Terraneous.

N. (Lastrea) OBTUSILOBUM, *Baker.* (p. 284).  
Mountain forests, at an elevation of about 6,000 feet. Peculiar to Ceylon.—Thwaites. Terraneous.

N. (Lastrea) ODORATUM, *Baker* (p. 280)—*N. hirsutum*, *Don.*;  
*N. eriocarpum*, *Dec.*  
On rocks, on the eastern ranges of the Central Province.

N. OTARIA, *Baker* (p. 283)—*N. aristatum*, *Hk.*; *Gonogamma*, *Thos.*  
Pittawella villages. Dies off during part of the year.

N. PENNIGERUM, *Hook.* (p. 282)—*N. articulatum*, *Moore*;  
*Aspidium megaphyllum*, *Mett.*  
Not uncommon in the forests of the Central Province, at an elevation of from 2,000 to 4,000 feet. Terraneous.

NEPHRODIUM POLYMORPHUM, *Baker* (p. 297)—*Aspidium grandifolium*, *Mett.*

Not uncommon in the forests of the Central and Southern Provinces, at an elevation of from 2,000 to 5,000 feet, among rocks.

N. (*Lastrea*) PROLIXUM, *Baker* (p. 268)—N. *ochthades*, *Hk.*; N. *appendiculatum*, *Hk.*

Common in the higher forests of the Central Province. Terraneous.

N. PTEROIDES, *J. Sm.* (p. 289)—N. *terminans*, *Hook.*

Common in the low country.—Thwaites. In the forests of the Central Province, below an elevation of 3,000 feet. Terraneous.

N. (*Lastrea*) RECEDENS, *Hk.* (p. 281).

Central Province; common in the woods.—Thwaites. At an elevation of from 2,000 to 5,000 feet. Terraneous.

N. (*Lastrea*) SETIGERUM, *Baker* (p. 284)—N. *tenericaule*, *Hk.*; *Aspidium uliginosum*, *Kze.*

Common in the Central Province, in shady places, at an elevation of from 1,500 to 3,000 feet. Terraneous.

N. (*Sagenia*) SIMULANS, *Baker* (p. 300)—*Sagenia Thwaitesii*, *Bedd.*

Forests about Galle, Southern Province. Terraneous. Peculiar to Ceylon.

N. (*Lastrea*) SPARSUM, *Don.* (p. 276 and 498)—N. *purpurascens*, *Hk.*

Abundant in the forests of the Central and Southern Provinces, above an elevation of 3,000 feet.

"N. SPARSUM, var. *obtusissima*, *Hk.*

The commonest form in the higher forests."—Thwaites.

N. (*Sagenia*) SUBTRIPHYLLUM, *Baker.*

Forests of the Central Province; not common.—Thwaites. At low elevations about Kurunugalla and Rattotta. Terraneous.



*NEPHRODIUM* (*Lastrea*) *STYRMATICUM*, *Baker* (p. 272)—*N. spectabile*, *Hk.*

Dr. Thwaites says of this species: "I only found this once, in a forest near Kandy, which has since been felled; but probably it is to be found elsewhere." Forests of Oodawella. Terraneous.

*N.* (*Lastrea*) *THWAITESII*, *Baker* (p. 277)—*Aspidinm concinnum*, *Thwaites*.

In the forests of the Southern Province, at an elevation of about 2,000 feet. Terraneous. Peculiar to Ceylon.

*N. TRUNCATUM*, *Presl.* (p. 294)—*N. abruptum*, *Presl.*; *N. Hudsonianum*, *Brack.*; *N. eusorum*, *Thwaites*.

Not uncommon in the forests of the Central Province, at an elevation of from 2,000 to 5,000 feet. Terraneous.

*N.* (*Lastrea*) *UNDULATUM*, *Baker* (p. 276).

Found in but one locality, on the upper part of Wattakelly Hill. Terraneous. Peculiar to Ceylon.

*N. UNITUM*, *R. Br.* (p. 289).

Western and Southern Provinces, in moist and marshy places.

*N.* (*Lastrea*) *WALKERÆ*, *Hook.* (p. 493).

In the forests of the Southern Province and of Saffragam, up to an elevation of 3,000 feet. Terraneous. Peculiar to Ceylon.

#### NEPHROLEPIS.

*N. ACUTA*, *Presl.* (p. 301)—*N. punctulata*, *ensifolia* and *splendens*, *Presl.*; *N. biserrata*, *Schott.*

Not so common as *N. exaltata*; grows at lower elevations.

*N. CORDIFOLIA*, *Baker* (p. 300)—*N. tuberosa*, *Hk.*

Extremely common, on rocks, at all elevations up to 5,000 feet.

*N. EXALTATA*, *Schott.* (p. 301).

Very common, on rocks and banks on the roadsides, in the Central and Western Provinces, up to an elevation of 5,000 feet.

*NEPHROLEPIS RAMOSA*, *Baker* (p. 301)—*N. obliterated*, *Hk.*;  
*N. trichomanoides*, *J. Sm.*

Common in the forests of the Central and Southern Provinces, at an elevation of from 2,000 to 5,000 feet, climbing on trees.

### OLEANDRA.

*A. MUSÆFOLIA*, *Kze.* (p. 302).

Not uncommon, on rocks and trees, in the forests of the Central Province, up to an elevation of 6,000 feet. Dies off during northeast monsoon.

### OPHIOGLOSSUM.

*O. NUDICAULE*, *L.* (p. 445)—*O. parvifolium*, *Hk.* and *Gr.*

On patnas about Bambragalla, Matale.

*G. PENDULUM*, *L.* (p. 446).

On trees, at low elevations.

*O. VULGATUM*, *L.* (p. 445).

About Newera Ellia, in the open country.

### OSMUNDA.

*O. JAVANICA*, *Blume.* (p. 426)—*O. vachellii*, *Hk.*; *O. Presliana*, *J. Sm.*

Very common, on rocks, in the beds of streams, in the forests about Newera Ellia.

### PELLÆA.

*P. (Allosorus) BOIVINI*, *Hk.* (p. 149).

Summit of Wattakelly Hill. Terraneous. Probably dies off during part of the year.

*P. (Platyloma) FALCATA*, *Fee.* (p. 151).

Near Rock Cave, Telgamma. Terraneous.

*P. (Cheilopteron) GERANÆFOLIA*, *Fee.* (p. 146)—*Pteris color*, *L.* and *F.*

Very common, on rocks and walls, up to an elevation of 4,000 feet, at Mattoorattoo, Ouvah and Ambawella.

## POLYPODIUM.

*P. (Niphobolus) ADNASCENS*, Sw. (p. 449)—*P. spissum*, Bory.  
Common, on rocks and trees, in the Western and Central  
Provinces, up to an elevation of 2,000 feet.

*P. CORNIGERUM*, Baker (p. 503).  
One plant only found by Dr. Thwaites, at Horton Plains.  
Peculiar to Ceylon.

*P. CUCULLATUM*, Nees. (p. 324).  
Not uncommon, on rocks and trees, in the Central and  
Southern Provinces, at an elevation of from 3,000 to 5,000 feet.

*P. DECORUM*, Brack. (p. 331).  
Singhe Rajah forest.—Thwaites.

*P. (Phymatodes) DILATATUM*, Wall. (p. 365).  
Forest above Telgamma, at an elevation of 4,000 feet. Rare.

*P. (Phegopteris) DISTANS*, Don. (p. 308)—*P. paludosum*, Blume.  
In marshy places about Newera Ellia.

*P. (Niphobolus) FISSUM*, Baker (p. 351)—*P. porosum*, Wall.  
Common, on trees and rocks, in the forests of the Central  
Province, at an elevation of from 3,000 to 5,000 feet.

*N. (Niphobolus) GARDNERI*, Mett. (p. 352).  
Common, on rocks and trees, in the Central and Southern  
Provinces, up to an elevation of 3,000 feet. Peculiar to Ceylon.

*H. GLANDULOSUM*, Hook. (p. 327).  
On trees, in the forest near the summit of Wattakella Hill.  
Rare; peculiar to Ceylon.

*P. HIRTELLUM*, Bl. (p. 320)—*P. lasiosorum*, Hook. (?)  
Forests of Dickoya and Telgamma.

*P. (Phymatodes) IRIODES*, Lam. (p. 360)—*Acrostichum punctatum*, Linn.  
Below Pittawella, on trees and rocks.

POLYPODIUM (Phymatodes) LANCEOLATUM, *Linn.* (p. 356)—*P. lepidotum*, *Willd.*

At Ambawella, on rocks and stumps, among the coffee trees.

*P.* (Phymatodes) LINEARE, *Thun.* (p. 354)—*P. loriforme*, *Wall.*;  
*P. excavatum*, *Bory.*

Common in the forests about Newera Ellia and Hackgalla, on rocks and trees.

*P.* (Drynaria) LINNÆI, *Bory.* (p. 368)—*P. sparsisorum*, *Desv.*  
Western Province, near Columbo.

*P.* (Phymatodes) MEMBRANACEUM, *Don.* (p. 360).

On rocks and trees, in the forests of the Central Province, at an elevation of from 2,000 to 5,000 feet. Dies off during the northeast monsoon.

*P. MEDIALE*, *Baker* (p. 507).  
Peculiar to Ceylon.

*P. MINUTUM*, *Bl.* (p. 328).

Not uncommon in the forests of the Central Province, above an elevation of 3,000 feet, on trees.

*P.* (Phymatodes) NIGRESCENS, *Bl.* (p. 364).

Common, on rocks and banks, in the forests of the Central Province, at an elevation of from 2,000 to 4,000 feet. Dies off.

*P. OBLIQUATUM*, *Blume.* (p. 328).

Common, on trees and rocks, in the forests about Newera Ellia.

*P.* (Niphobolus) PANNOSUM, *Mett.* (p. 512).

Formerly placed under the name of *Niphobolus lingua*, *Sie.*  
Not uncommon in the warmer parts of the Island, up to an elevation of 3,000 feet.—Thwaites.

*P.* (Phymatodes) PHYMATODES, *Linn.* (p. 364).

Common, at low elevations, in the Western and Central Provinces, on banks, rocks and trees.

POLYPODIUM (Goniopteris) PROLIFERUM, *Presl.* (p. 315).  
Minnery, Eastern Province. Not common.

P. (Phymatodes) PTEROPUS, *Bl.* (p. 362)—*P. tridactylon*, *Wall.*  
Mooroota, Ambegama. Grows in water.

P. (Phegopteris) PUNCTATUM, *Thunb.* (p. 312)—*P. rugulosum*,  
*Labill.*  
Common about Newera Ellia, in the forests and shady places.  
Terraneous.

P. (Drynaria) QUERCIFOLIUM, *Linn.* (p. 367).  
Extremely abundant, on rocks and trees, in the Western,  
Central and Southern Provinces, at all elevations up to 3,000 feet.

P. REPANDULUM, *Mett.* (p. 328)—*P. obliquatum*, *Hook.*  
In the forests about Rambodde, and in the Moorooa Coole,  
on trees. Not common; peculiar to Ceylon.

P. (Phegopteris) RUFESCENS, *Blume.* (p. 309).  
Not uncommon in the forests of the Central Province, at an  
elevation of from 2,000 to 5,000 feet. Terraneous.

P. THWAITESII, *Bedd.* (p. 508).  
Forests about Dickoya, on trees. Not common. Peculiar to  
Ceylon. Smells like rhubarb when dried.

P. (Phymatodes) TRIFIDUM, *Don.* (p. 363)—*P. oxylobum*, *Wall.*  
Common, on rocks and trees, in the forests about Newera  
Ellia and Oodapusselava. Dies off during northeast monsoon.

P. (Goniopteris) UROPHYLLUM, *Wall.* (p. 314)—*P. Kennedyi*,  
*F. Muell.*

Oodawella forest; terraneous; uncommon. "At Oodawella,  
near Kandy, and that was being cleared for planting coffee; the  
species is probably now extinct in Ceylon."—Thwaites.

P. ZEYLANICUM, *Mett.* (p. 321).  
Common in the forests about Newera Ellia, on rocks and  
trees. Peculiar to Ceylon.

PTERIS.

*P. (Pæsia) AQUILINI*, *L.* (p. 162)—*P. arachnoidea*, *Kaulf.*  
Extremely abundant at high elevations. Terraneous.

*P. (Campteria) BIAURITA*, *Linn.* (p. 164).  
Common at all elevations above 1,500 feet. Terraneous.

*P. CRETICA*, *Linn.* (p. 154)—*P. scabripes*, *Wall.*  
About Hackgalla. Terraneous.

*P. ENSIFORMIS*, *Burm.* (p. 155)—*P. crenata*, *Sw.*  
Banks and roadsides; common.—Thwaites. Very common,  
at low elevations, in the Central Province. Terraneous.

*P. HOOKERIANA*, *Agardh.* (p. 155).  
Regarded by Dr. Thwaites as a variety of *P. cretica*. In forests of the Southern Province, at very low elevations. Peculiar to Ceylon. Terraneous.

*P. (Lithobrochia) INCISA*, *Thunb.* (p. 172)—*P. vespertilionis*, *Labill.*; *P. sinuata*, *Brack.*

Common in the forests of the Central and Southern Provinces, above an elevation of 3,000 feet.

*P. LONGIFOLIA*, *Linn.* (p. 153)).  
Badulla Road, below Hackgalla. Terraneous.

*P. LONGIPES*, *D. Don.* (p. 161).—*P. pellucens*, *Agardh.*  
Glen forest, Matale. Terraneous.

*P. (Lithobrochia) MARGINATA*, *Bory.* (p. 172)—*P. tripartita* *Sw.*  
"Roadsides and waste ground, up to 2,000 feet or so."—Thwaites. Common in the forests of the Central and Southern Provinces. Very common about Galle. Terraneous.

*P. (Campteria) PATENS*, *Hook.* (p. 165)—*P. decussata*, *J. Sm.*  
Oodawella, Matale and Moorooa forests, above an elevation of 2,000 feet. Terraneous.

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*PTERIS QUADRIAURITA*, Retz. (p. 158).

Extremely abundant in the Western, Central and Southern Provinces, at all elevations up to 5,000 feet. Terraneous.

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SCHIZÆA.

*S. (Actinostachys) DIGITATA*, Sw. (p. 43).

In low jungles of Suffragam and Western Province. Terraneous.

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TÆNITIS.

*T. BLECHNOIDES*, Sw. (p. 397).

In the forests about Galle and Ratnapoora. Terraneous.

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TRICHOMANES.

*T. DIGITATUM*, Sw. (p. 76).

On trees, in the forests of the Southern Province, at an elevation of from 3,000 to 4,000 feet.

*T. EXIGUUM*, Baker (p. 464).

On rocks and trees, in the forests of Telgamma; also in the Southern Province, at an elevation of from 2,000 to 4,000 feet.

*T. FILICULA*, Bory. (p. 81)—*Didymoglossum plicatum*, V. D. B  
Common, on rocks and trees, in the forests of the Central and Southern Provinces, above an elevation of 2,000 feet.

*T. INTRAMARGINALE*, Hk. and Gr. (p. 79).

Ambagamo District.—Thwaites. Peculiar to Ceylon.

*T. MOTLEYI*, V. D. B. (p. 73)—*T. Henzaiense*, Bedd.

Not uncommon, on trees, in the forests of the Southern Province, at an elevation of from 2,000 to 3,000 feet.

*T. MUSCOIDES*, Swartz. (p. 75).

Common, on rocks, in the forests of the Southern and Central Provinces, at an elevation of about 4,000 feet.

*TRICHOMANES PALLIDUM*, *Blume*. (p. 80)—*T. glauco-fuscum*, *Hk.*; *T. album*, *Blume*.

On trees, in the forests of the Southern Province, at an elevation of from 3,000 to 4,000 feet.

*T. PARVULUM*, *Poiret* (p. 75).

Not uncommon, on rocks, in the forests of the Southern Province, at an elevation of about 3,000 feet.

*T. PROLIFERUM*, *Blume*. (p. 76)—*T. palmatum*, *Presl*.

On rocks and trees, in the forests about Hewissa; also at Ambagama.—Thwaites.

*T. PYXIDIFERUM*, *L.* (p. 81).

Top of Telgamma Pass, Kallibokka, and in the forests of the Southern Province, on wet rocks.

*T. RIGIDUM*, *Sw.* (p. 86).

Common, in the forests of the Central and Southern Provinces, above an elevation of 4,000 feet.

#### VITTARIA.

*V. ELONGATA*, *Sw.* (p. 395).

Very common, in the forests of the Central Province, above an elevation of 3,000 feet, on rocks and trees.

*V. (Tæniopsis) FALCATA*, *Kze.* (p. 395).

Forests of Hatgodde, Matale, and Elbedde Dickoya, on trees.

*V. (Tæniopsis) LINEATA*, *Sw.* (p. 396).

Forests of the Southern Province, on trees, at an elevation of about 2,000 feet.

*P. (Tæniopsis) SCOLOPENDRINA*, *Thwaites* (p. 396).

In forests about Ratnapoora, and in the Southern Province, on rocks and trees, up to an elevation of about 3,000 feet.

[FINIS.]



THE UNIVERSITY OF CHICAGO  
CHICAGO, ILLINOIS 60637

1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

2. Next, it is important to gather relevant information and data. This can be done through research, consultation with experts, or by analyzing existing data sets.

3. Once the information is gathered, the next step is to develop a plan or strategy to address the problem. This plan should outline the steps to be taken and the resources needed.

4. The fourth step is to implement the plan. This involves carrying out the tasks outlined in the plan and monitoring progress as it goes.

5. Finally, it is important to evaluate the results of the implementation. This involves comparing the actual outcomes with the expected outcomes and identifying any areas for improvement.

the 1990s, the number of people in the United States who are 65 years of age or older is projected to increase from 20 million to 30 million, and the number of people 75 years of age or older is projected to increase from 10 million to 15 million (U.S. Census Bureau, 1997). The number of people 85 years of age or older is projected to increase from 2 million to 4 million (U.S. Census Bureau, 1997). The number of people 90 years of age or older is projected to increase from 500,000 to 1 million (U.S. Census Bureau, 1997). The number of people 95 years of age or older is projected to increase from 100,000 to 200,000 (U.S. Census Bureau, 1997). The number of people 100 years of age or older is projected to increase from 10,000 to 20,000 (U.S. Census Bureau, 1997).

1. *Chlorophyll a*

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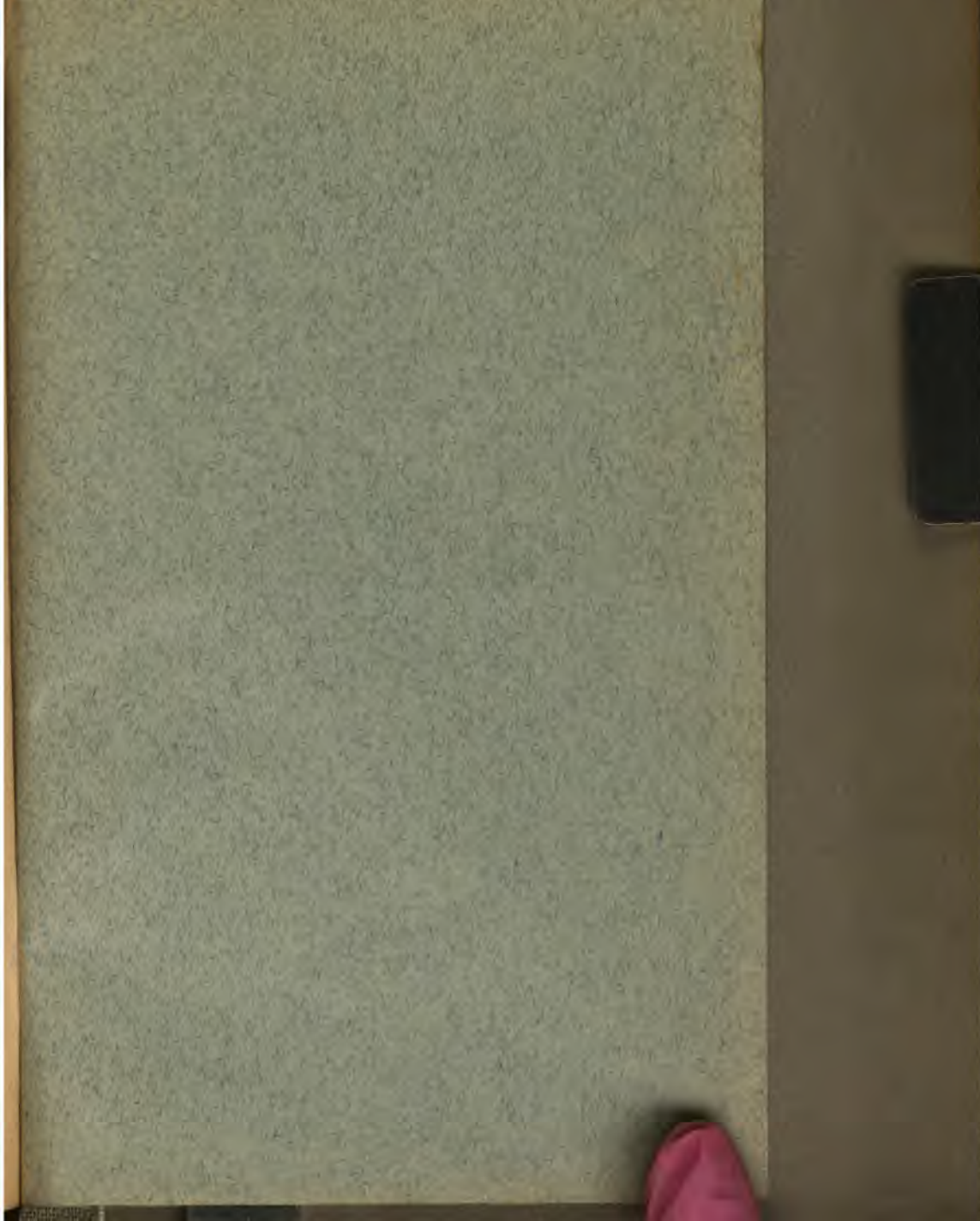
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1. The purpose of this document is to provide information on the status of the project and to recommend a course of action. The project is currently in the planning stage and it is recommended that the project be approved and funded. The project is of great importance and it is essential that it be completed as soon as possible. The project will have a significant impact on the community and it is essential that it be completed as soon as possible. The project will have a significant impact on the community and it is essential that it be completed as soon as possible.

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